

ABSTRACT OF THE DISCLOSURE

A Ni-based alloy hardened with the γ' phase, which is able to exhibit not only superior strength at high temperatures, but also excellent hot corrosion resistance and oxidation resistance at high temperatures in spite of containing no Re or reducing the amount of Re. The Ni-based superalloy contains, by weight, C: 0.01 to 0.5%, B: 0.01 to 0.04%, Hf: 0.1 to 2.5%, Co: 0.8 to 15%, Ta: more than 0 % but less than 8.5%, Cr: 1.5 to 16%, Mo: more than 0 % but less than 1.0%, W: 5 to 14%, Ti: 0.1 to 4.75%, Al: 2.5 to 7%, Nb: more than 0 % but less than 4%, V: 0 to less than 1.0%, Zr: 0 to less than 0.1%, Re: 0 to less than 9%, at least one of platinum group elements: 0 to less than 0.5% in total, at least one of rare earth elements: 0 to less than 0.1% in total, and the rest being Ni except for unavoidable impurities.